

SEQUENCE LISTING

<110> Michaels, Frank

<120> TRANSMUCOSAL ADMINISTRATION OF AGGREGATED ANTIGENS

<130> 054044-5001WO

<150> 60/419,279

<151> 2002-10-17

<160> 3

<170> PatentIn version 3.2

<210> 1

<211> 669

<212> DNA

<213> hepatitis B core protein

<220>

<221> CDS

<222> (1)..(669)

<400> 1

tag gca taa att ggt ctg cgc acc agc acc atg caa ctt ttt cac ctc	48
Ala Ile Gly Leu Arg Thr Ser Thr Met Gln Leu Phe His Leu	
1 5 10	
tgc cta atc atc tct tgt tca tgt cct act gtt caa gcc tcc aag ctg	96
Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr Val Gln Ala Ser Lys Leu	
15 20 25 30	
tgc ctt ggg tgg ctt tgg ggc atg gac atc gac cct tat aaa gaa ttt	144
Cys Leu Gly Trp Leu Trp Gly Met Asp Ile Asp Pro Tyr Lys Glu Phe	
35 40 45	
gga gct act gtg gag tta ctc tcg ttt ttg cct tct gac ttc ttt cct	192
Gly Ala Thr Val Glu Leu Leu Ser Phe Leu Pro Ser Asp Phe Phe Pro	
50 55 60	
tca gta cga gat ctt cta gat acc gcc tca gct ctg tat cgg gaa gcc	240
Ser Val Arg Asp Leu Leu Asp Thr Ala Ser Ala Leu Tyr Arg Glu Ala	
65 70 75	
tta gag tct cct gag cat tgt tca cct cac cat act gca ctc agg caa	288
Leu Glu Ser Pro Glu His Cys Ser Pro His His Thr Ala Leu Arg Gln	
80 85 90	
gca att ctt tgc tgg ggg gaa cta atg act cta gct acc tgg gtg ggt	336
Ala Ile Leu Cys Trp Gly Glu Leu Met Thr Leu Ala Thr Trp Val Gly	
95 100 105 110	
gtt aat ttg gaa gat cca gcg tct aga gac cta gta gtc agt tat gtc	384
Val Asn Leu Glu Asp Pro Ala Ser Arg Asp Leu Val Val Ser Tyr Val	
115 120 125	
aac act aat atg ggc cta aag ttc agg caa ctc ttg tgg ttt cac att	432
Asn Thr Asn Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His Ile	

130	135	140	
tct tgt ctc act ttt gga aga gaa aca gtt ata gag tat ttg gtg tct			480
Ser Cys Leu Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val Ser			
145	150	155	
ttc gga gtg tgg att cgc act cct cca gct tat aga cca cca aat gcc			528
Phe Gly Val Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala			
160	165	170	
cct atc cta tca aca ctt ccg gag act act gtt gtt aga cga cga ggc			576
Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr Val Val Arg Arg Arg Gly			
175	180	185	190
agg tcc cct aga aga aga act ccc tcg cct cgc aga cga agg tct caa			624
Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro Arg Arg Arg Arg Ser Gln			
195	200	205	
tcg ccg cgt cgc aga aga tct caa tct cgg gaa tct caa tgt tag			669
Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg Glu Ser Gln Cys			
210	215	220	
<210> 2			
<211> 219			
<212> PRT			
<213> hepatitis B core protein			
<400> 2			
Ile Gly Leu Arg Thr Ser Thr Met Gln Leu Phe His Leu Cys Leu Ile			
1	5	10	15
Ile Ser Cys Ser Cys Pro Thr Val Gln Ala Ser Lys Leu Cys Leu Gly			
20	25	30	
Trp Leu Trp Gly Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr			
35	40	45	
Val Glu Leu Leu Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg			
50	55	60	
Asp Leu Leu Asp Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser			
65	70	75	80
Pro Glu His Cys Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu			
85	90	95	
Cys Trp Gly Glu Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu			
100	105	110	
Glu Asp Pro Ala Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn			
115	120	125	
Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu			
130	135	140	
Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val			
145	150	155	160

Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu
 165 170 175

Ser Thr Leu Pro Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro
 180 185 190

Arg Arg Arg Thr Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg
 195 200 205

Arg Arg Arg Ser Gln Ser Arg Glu Ser Gln Cys
 210 215

<210> 3
 <211> 168
 <212> PRT
 <213> Artificial
 <220>
 <223> HBcAg

<400> 3

Met Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
 1 5 10 15

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
 20 25 30

Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
 35 40 45

Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu Cys His Ser Pro His
 50 55 60

His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
 65 70 75 80

Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp
 85 90 95

Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
 100 105 110

Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
 115 120 125

Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
 130 135 140

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
 145 150 155 160

Leu Glu His His His His His His
 165